Air Pollution Control
Title V Permit to Operate
Statement of Basis for Final Permit No. V-SU-0043-06.02
March 2009

Samson Resources
Jaques Compressor Station
Southern Ute Indian Reservation
La Plata County, Colorado

1. Description of Significant Permit Modification #2

The Jaques Compressor Station is a natural gas compression facility owned and operated by Samson Resources (Samson). The facility is located within the exterior boundary of the Southern Ute Indian Reservation in southwest Colorado.

The facility is a major part 71 source for carbon monoxide (CO), nitrogen oxides (NOx), and volatile organic compounds (VOCs). In addition, the facility is operating under a facility-wide hazardous air pollutant (HAP) emission cap of 23 tons per year (tpy), a facility-wide formaldehyde (CH_2O) emission cap of 9.5 tpy, and benzene emission limits for dehydration units D1 and D2 of 1.8 tpy.

On October 23, 2008, Samson requested a significant modification to replace the enforceable JATCO condenser/combustor controls on the two dehydration units with enforceable PESCO Flare Stack BTEX control units. PESCO guarantees a total destruction of 98 percent or greater and the units are guaranteed to meet the requirements in 40 CFR 60.18. Although the PESCO Flare Stacks are being proposed to control HAPs, which are covered under part 63, the requirements at 60.18 and 63.11, both covering flares, are essentially identical. Therefore, EPA verified that if the PESCO Flare Stacks are guaranteed to meet the requirements in 40 CFR 60.18, then it can be inferred that they would also meet the requirements in 40 CFR 63.11. The PESCO Flare Stack control unit consists of two vertical concentric cylinders. A continuously-fired main burner and the pilot light are located at the bottom of the inner cylinder. Combustion air is supplied by flame arrestors near the bottom of the outer cylinder. The flame arrestors also function to cool the annular space between the outer shell and the inner liner. The overhead gas stream from the dehydration unit enters the flare stack into a circular torus, stainless steel, steam cup. Pipes direct the gas from the inside of the torus to the combustion zone, located beneath the torus. Any free liquids are evaporated and forced into the combustion zone. All exhaust gases are released up the inner cylinder of the flare stack.

Samson also requested to install a 18 MMscfd Western dehydration unit with a 0.375 MMBtu/hr reboiler burner to be used for backup dehydration capabilities, in the event that one of the other units goes down or is being serviced (unit D3). This dehydration unit will be equipped with a JATCO condenser/combustor controller capable of reducing uncontrolled benzene emissions by at least 95%. Samson has agreed to only operate two dehydration units at any one time; therefore, the facility potential to emit (PTE) will remain unchanged or will decrease if the 18 MMscfd backup dehydration unit is run in place of the 30 MMscfd dehydration unit. Samson will continue to limit the facility HAP emissions to 23 tpy and will calculate and record emissions on a monthly basis. The benzene emissions from each dehydration unit will continue to be calculated and recorded on a monthly basis and limited

to 0.9 tons for each unit in any 12 consecutive months. Samson will track the startup and shutdown of all three dehydration units at the facility, maintain records of the periods of startup and shutdown for each unit, and summarize these records in the facility's semi-annual reports, in order to document that no more than two of the dehydration units operate at any one given time.

As a result of Samson's requested permit modifications, EPA has specified two operating scenarios in Section III.B. (Work Practice and Operational Requirements) of the permit to account for when the backup dehydration unit, D3, is operated in place of one or the other primary units D1 and D2. The operating scenarios are referred to as "Operating Scenario A" and "Operating Scenario B." EPA has modified the existing conditions in Section III.B. of the permit to specify distinct BTEX control requirements for each operating scenario. The distinct requirements specify the use of PESCO Flare Stack BTEX control units on dehydration units D1 and D2, instead of JATCO Shell & Tube Steam to Liquid Heat Exchangers (condenser/combustors), as previously permitted. A JATCO condenser/combustor will be used on backup unit D3. Because PESCO has guaranteed 98 percent or greater BTEX reduction and the ability to meet the requirements set forth in 40 CFR 60.18 (and by inference 40 CFR 63.11), EPA has modified the existing permit condition in Section III for units D1 and D2 from 95 percent BTEX reduction to 98 percent BTEX reduction, based on the manufacturer guarantee. To account for when the 18 MMscfd backup dehydrator unit D3, controlled using a JATCO condenser/combustor, is being operated in place of units D1 or D2 ("Operating Scenario B"), EPA has required 95 percent BTEX reduction, based on JATCO's manufacturer guarantee. The monitoring, reporting, and recordkeeping requirements specific to the dehydration units have essentially remained as previously permitted, with the exceptions of additional references to the new backup unit D3 and additional recordkeeping and reporting requirements to account for the required tracking of each startup and shutdown of each dehydration unit when operating under the new distinct operating scenarios.

This action is intended to approve the significant modification and has resulted in the following changes to title V Permit No. V-SU-0043-06.01:

- **Section I.B. Source Emission Points/Table 1:** Updated the emission unit table, Table 1, to incorporate the PESCO Flare Stack BTEX control units installed on the existing 18 MMscfd glycol dehydration unit (D1) and 30 MMscfd glycol dehydration unit (D2). Added a new 18 MMscfd Western backup dehydration unit equipped with a JATCO condenser/combustor BTEX control unit.
- **Section III – Specific Requirements for Glycol Dehydrators:**
    1. Revised Section III to reference new backup dehydration unit D3 in addition to units D1 and D2.
    2. Revised Section III.B Work Practice and Operational Requirements to specify two distinct operating scenarios (Operating Scenarios A and B) to allow for operating unit D3 on an as-needed backup basis. Revised the BTEX emission control equipment requirements for units D1 and D2 from JATCO condenser/combustor BTEX control units to PESCO Flare Stack BTEX control units. Added a requirement to install and operate a JATCO condenser/combustor BTEX emission control unit on new backup unit D3.
    3. Revised Section III.C. Monitoring Requirements to reference the new backup unit D3 and monitor emissions from all units that operated during each one-month testing period.
    4. Revised Section III.D. Recordkeeping Requirements to reference new backup unit D3, to require recordkeeping of each incidence of startup and shutdown of the permitted units when changing the allowed operating scenario, and to require recordkeeping of the

scenario under which the facility is operating for each required round of gas analysis testing.

5. Revised Section III.E. Reporting Requirements to require that details of each recorded incidence of startup and shutdown be reported in the semi-annual report required for the six month period in which the incidence occurred.

The remainder of this Statement of Basis outlines general information about the Jaques Compressor Station and the basis for the terms and conditions of the modified permit.

2. Facility Information

a. Location

The Jaques Compressor Station, owned and operated by Samson Resources, is located within the exterior boundaries of the Southern Ute Indian Reservation, in the southwestern part of the State of Colorado. The exact location is NW/4 Section 26, T33N, R8W, in La Plata County, Colorado. The mailing address is:

Samson Resources
Two West Second Street
Tulsa, OK 74103

b. Contacts

(1) The facility contact is:

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(2) The responsible official is:

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(3) The Tribal contact is:

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Air Program Manager - Southern Ute Indian Tribe
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c. Description of operations

The Jaques Compressor Station is a facility that dehydrates and compresses inlet coal-bed methane gas gathered from several wells to transmission pipeline specifications. Gas entering the facility from the field is first fed to an inlet separator that gravimetrically removes water that may have formed during transportation from the supplying gas wells. Separator overhead gas is fed to one of up to six compressor engines from a common suction header. The compressors discharge gas to a common discharge header that feeds to two dehydration units operating in parallel. Triethylene glycol is circulated counter-currently and absorbs the water in the wet gas. Rich glycol is circulated to a reboiler, where moisture is driven to the atmosphere by heating the glycol. Dry gas exits the contactor and is directed to the sales line, where it is metered and exits the facility. The current gas throughput of the facility is approximately 48 MMscfd with six compressor engines operating.

d. List of all units and emission-generating activities

Samson provided the information shown below for emission units operating at the Jaques Compressor Station. Table 1 lists emission units and any air pollution control devices. Emission units identified as "insignificant" emitting units (IEUs) are listed separately in Table 2.

Table 1 - Emission Units
Samson Jaques Compressor Station

Emission Unit ID	Description	Control Equipment
	Two Waukesha L5794LT Lean Burn Compressor Engines, 1400 site rated hp, natural gas fired:	
E1	Serial No. C-14536/1 Manufactured 4/2005 Installed 4/2005	None
E2	Serial No. C-17235/1 Manufactured 1/2007 Installed 8/30/2007	
	Four Waukesha L5794LT Lean Burn Compressor Engines, 1400 site rated hp, natural gas fired:	
E3	Serial No. C-15810/1 Manufactured 8/2005 Installed 12/9/2005	Oxidation Catalyst
E4	Serial No. C-15809/1 Manufactured 8/2005 Installed 12/9/2005	
E5	Serial No. C-15866/1 Manufactured 4/2006 Installed 6/28/2007	
E6	Serial No. C-15965/1 Manufactured 3/2006 Installed 2/1/2008	
	18 MMscfd PESCO Dehydration Unit Glycol Regenerator & 0.375 MMBtu/hr natural gas-fired reboiler burner (Operating Scenario A or B):	PESCO Flare Stack
D1	Serial No. 101727 Installed 2003	
	30 MMscfd NATCO Dehydration Unit Glycol Regenerator & 1.25 MMBtu/hr natural gas-fired reboiler burner (Operating Scenario A or B):	PESCO Flare Stack
D2	Serial No. T-1A8780101 Installed TBD 2009	
	18 MMscfd Western Dehydration Unit Glycol Regenerator & 0.375 MMBtu/hr natural gas-fired reboiler burner (backup use under Operating Scenario B only):	JATCO Condenser/Combustor
D3	Serial No. 91-665-01 Installed TBD 2009	

Part 71 allows sources to separately list in the permit application units or activities that qualify as "insignificant" based on potential emissions below 2 tpy for all regulated pollutants that are not listed as hazardous air pollutants (HAP) under section 112(b) and below 1000 lbs per year or the de minimus level established under section 112(g), whichever is lower, for HAPs. However, the application may not omit information needed to determine the applicability of, or to impose, any applicable requirement. Units that qualify as "insignificant" for the purposes of the part 71 application are in no way exempt from applicable requirements or any requirements of the part 71 permit.

Table 2 - Insignificant Emission Units
Samson Jaques Compressor Station

Emission Unit ID	Description
IEU1	6 – 500 gallon lubricating oil storage tanks
IEU2	6 – 300 gallon used oil storage tanks
IEU3	3 – 500 gallon ethylene glycol storage tanks
IEU4	10 – 500 bbl produced water storage tanks
IEU5	2 – 500 bbl slop tanks
IEU6	2 – 100 gallon rum drums for methanol storage
IEU7	2 – 0.60 MMBtu/hr natural gas fired regenerator burners
IEU8	11 – 0.12 MMBtu/hr natural gas fired tank heaters
IEU9	1 – 84 hp Ford 460, 6 cylinder pump engine (Pre-NSPS JJJJ, manufactured pre-1996)
IEU10	1 – 300 gallon TEG storage tank
IEU11	1 – 500 gallon TEG storage tank
IEU12	1 – 21 hp Ford 4 cylinder engine (Pre-NSPS JJJJ, manufactured 1995)
IEU13	2 – 0.125 MMBtu/hr burners on the slug catchers
IEU14	1 - 13 hp Arrow pumping unit engine (Pre-NSPS JJJJ, manufactured pre-1980)
IEU15	1 – 0.5 MMBtu/hr burner for the production unit

e. Construction, permitting, and compliance history

The Jaques Compressor Station was initially constructed in January 2003 as a minor source for both criteria and hazardous air pollutants (HAPs), with one Waukesha L5794LT compressor engine (E1) and two 18 MMscfd dehydration units (D1 & D2). The engine, E1, was replaced by an identical unit in April of 2005. The original construction did not trigger any permitting requirements.

In May of 2004 a second Waukesha L5794LT compressor engine, E2, was added. However, the modification was minor with regard to Prevention of Significant Deterioration (PSD), requiring no

preconstruction permitting, and the facility remained a minor source for both criteria and HAPs for purposes of title V permitting. This engine was replaced by an identical unit in August of 2007.

In December of 2005, two more Waukesha L5794LT engines were added to the facility (E3 & E4). While this modification was minor with regard to PSD, requiring no preconstruction permitting, the facility became a major title V source due to facility-wide NOx emissions which exceeded 100 tpy. The triggering of title V permitting requirements required that Samson submit a part 71 permit application by December 2006, one year after the installation of the two new engines. However, the HAP emissions remained below the major source thresholds (10/25 tpy) for Maximum Achievable Control Technology (MACT) standards. Therefore, neither the RICE MACT (40 CFR 63, subpart ZZZZ) nor the Oil and Gas Production MACT (40 CFR 63, subpart HH) applied to this facility at that time.

Upon submission of its initial part 71 permit application in December of 2006, Samson notified EPA of the planned installation of two more Waukesha L5794LT engines (E5 & E6). While this installation would not trigger the need for PSD pre-construction permitting, it would trigger the Reciprocating Internal Combustion Engine (RICE) MACT for all the engines installed after December 19, 2002, due to potential formaldehyde emissions exceeding the 10 tpy trigger for any one pollutant. Therefore, Samson asked for federally enforceable restrictions on facility-wide formaldehyde emissions in anticipation of the installation of the two new Waukesha L5794LT compressor engines whose emissions would cause the facility to be major for HAPs. EPA issued the initial part 71 permit on April 27, 2007. Samson installed the two new engines <u>after</u> the issuance of its initial part 71 permit with the enforceable restrictions on formaldehyde, thereby avoiding the RICE MACT requirements at 40 CFR 63, subpart ZZZZ.

<u>Due to the federally enforceable requirements to control formaldehyde emissions at less than 10 tpy, established prior to the construction of E5 and E6, the Jaques Compressor Station did not trigger major source requirements of the RICE MACT at 40 CFR part 63, subpart ZZZZ.</u>

While the Jaques Compressor Station was considered a minor HAP facility, EPA promulgated amendments to the National Emission Standards for Hazardous Air Pollutants for Source Categories From Oil and Natural Gas Production Facilities (MACT HH) on January 3, 2007, that could potentially subject the facility to standards for its dehydrators. The amended rule promulgated standards for area source oil and gas production facilities and specifically affects glycol dehydration units. Dehydration units with a potential to emit of benzene greater than 1 tpy operating outside of dense population areas would be required to optimize the glycol recirculation pump rate. This is a requirement that Samson had expressed interest in avoiding, as it was impractical for its operating situation since the incoming characteristics of the gas fluctuate and the quantity of gas requiring dehydration could fluctuate on a daily basis. According to Samson, optimization of the glycol recirculation pump rate could potentially have to be performed on a daily basis at a remote and unmanned facility, which the company has deemed impractical.

On January 18, 2008, EPA promulgated area source MACT standards for RICE (amendment to 40 CFR 63, Subpart ZZZZ). The HAP and formaldehyde emission caps and the benzene emission limits on the dehydrators did not protect this facility from potentially triggering this new area source standard. EPA reviewed the engines currently operating at this facility and found that none of these engines had yet triggered the new standard.

On October 18, 2007, Samson requested an administrative amendment to the title V permit to clarify the temperature and pressure parameters for monitoring engine catalyst performance. In addition, Samson provided an updated list of insignificant emission units. This amendment was not yet processed before EPA received a second application for a permit modification for additional requested changes.

On March 4, 2008, Samson requested a significant modification to the Jaques part 71 permit to replace an existing 18 MMscfd glycol dehydration unit (D2) with a larger 30 MMscfd unit in a plan to increase throughput capacity at the facility. Samson proposed to install emission controls on the new 30 MMBtu/hr dehydration unit (D2) and the existing 18 MMscfd unit (D1). Samson requested enforceable benzene emission limits for each of the dehydration units and requested that facility-wide HAP emission limits be established in the permit prior to constructing the proposed modifications and increasing throughput capacity at the facility thereby avoiding any possibility of triggering the requirement to optimize the glycol recirculation pump rate pursuant to the new oil and gas regulations for area sources. In addition, Samson requested that EPA include a facility-wide HAP emission cap of less than 25 tpy to ensure that the facility remains a minor source of aggregated HAP emissions.

Samson provided modeled emissions for each dehydrator currently operating at the facility to verify that the emission standard in MACT subpart HH had not yet been triggered. Based on average annual gas throughputs and operating conditions, the model indicates that the dehydrators' potential to emit are below 1 tpy for benzene emission for the existing operating scenario. Calculation of the PTE using average annual parameters is allowed pursuant to 40 CFR 63, subpart HH. In addition, Samson's application provides that the facility is currently a minor HAP facility and has not triggered any MACT emission standard.

On July 14, 2008, EPA Region 8 issued the significantly modified permit with enforceable JATCO condenser/combustor emission controls on the new 30 MMscfd dehydration unit and existing 18 MMscfd dehydration unit. EPA Region 8 also established enforceable benzene emission limits of 0.9 tpy in the permit for each of the two dehydration units prior to constructing the proposed modifications and increasing throughput capacity at the facility to provide assurances of not triggering the requirement to optimize the glycol recirculation pump rate pursuant to 40 CFR 63, subpart HH for area sources. Additionally, EPA Region 8 established a requested facility-wide HAP emission cap of 23 tpy, in addition to the existing 9.5 tpy facility-wide formaldehyde cap, to ensure that the facility remained a minor HAP source.

Due to the federally enforceable requirements to control benzene emissions, established prior to the modification of D1 and D2, the Jaques Compressor Station did not trigger the area source requirements of 40 CFR 63, subpart HH for dehydration units that emit greater than or equal to 1 tpy of benzene.

As explained in Section 1 of this Statement of Basis, on October 23, 2008, Samson requested a significant modification to replace the enforceable JATCO condenser/combustor controls on D1 and D2 with enforceable PESCO Flare Stack BTEX control units. Samson also requested to install a 18 MMscfd Western dehydration unit with a 0.375 MMBtu/hr reboiler burner (unit D3) to be used for backup dehydration capabilities only, in the event that one of the other units goes down or is being serviced.

Table 3 illustrates the changes in emissions due to modifications that have occurred at this facility.

Table 3 –Construction and Permitting History
Samson Jaques Compressor Station

January 2003 Initial Construction							
Unit	Description	NOx (tpy)	CO (tpy)	VOC (tpy)	CH_2O (tpy)	Benzene (tpy)	Total HAPs (tpy)
E1	Waukesha L5794LT (uncontrolled)	33.8	24.3	6.8	2.2	-	2.2
D1	18 MMscfd Glycol Dehydrator	0.2	0.1	31.7	0.0	0.9	5.3
D2	18 MMscfd Glycol Dehydrator	0.2	0.1	10.5	0.0	0.3	2.0
IEUs	Insignificant units	2.3	2.4	0.4	0.0	-	0.0
	January 2003 PTE Totals	36.5	26.7	49.4	2.2	1.2	9.5
Minor source for PSD and title V permitting. Minor HAP source.							
May 2004 Modification – Add 1 engine							
Unit	Description	NOx (tpy)	CO (tpy)	VOC (tpy)	CH_2O (tpy)	Benzene (tpy)	Total HAPs (tpy)
E2	Waukesha L5794LT (uncontrolled)	33.8	24.3	6.8	2.2	-	2.2
	Total Emissions Increase for Project	33.8	24.3	6.8	2.2	-	2.2
Minor Modification of a minor PSD source							
	May 2004 PTE Totals (includes dehydrators)	70.3	51.0	56.2	4.4	1.2	11.7
Minor source for PSD and title V permitting. Minor HAP source.							
December 2005 Modification – Add 2 engines							
Unit	Description	NOx (tpy)	CO (tpy)	VOC (tpy)	CH_2O (tpy)	Benzene (tpy)	Total HAPs (tpy)
E3	Waukesha L5794LT (new, uncontrolled)	33.8	24.3	6.8	2.2	-	2.2
E4	Waukesha L5794LT (new, uncontrolled)	33.8	24.3	6.8	2.2	-	2.2
	Total Emissions Increase for Project	67.6	48.6	13.6	4.4	-	4.4
Minor modification of a minor PSD source.							
	December 2005 PTE Totals (includes dehydrators)	137.9	99.6	69.8	8.8	1.3	16.1
Minor PSD source. Minor HAP source. Major for title V permitting. Application due December 2006.							
2007 – Initial part 71 Permit: Add 2 engines; Control 4 Engines with Federally Enforceable Restrictions and a formaldehyde cap of 9.5 tpy; Add enforceable restrictions before construction of E5 & E6.							
Unit	Description	NOx (tpy)	CO (tpy)	VOC (tpy)	CH_2O (tpy)	Benzene (tpy)	Total HAPs (tpy)
E3	Waukesha L5794LT (existing, controlled)	-0.0	-0.0	-0.0	-1.3	-	-1.3
E4	Waukesha L5794LT (existing, controlled)	-0.0	-0.0	-0.0	-1.3	-	-1.3
E5	Waukesha L5794LT (new, controlled)	33.8	24.3	6.8	0.9	-	0.9
E6	Waukesha L5794LT (new, controlled)	33.8	24.3	6.8	0.9	-	0.9
	Total Emissions Increase for Project	67.6	48.6	13.6	-0.8	-	-0.8
Minor modification of a minor PSD source.							
	2007 PTE Totals (includes dehydrators)	205.5	148.2	86.3	8.0 (9.5)	1.3	15.3
Minor PSD source. Synthetic minor HAP Source. Major title V source – Permit #V-SU-0043-06.00 Effective 4/27/07							

Table 3 –Construction and Permitting History (continued)
Samson Jaques Compressor Station

May 2008 – Significant Permit Modification #1: Add controls to dehydrator D1; Replace dehydrator D2 with a 30 MMscfd unit and add controls; Establish enforceable benzene emission limit for D1 & D2 and a facility-wide HAP emission limit before construction to avoid area source MACT HH requirements for the dehydrators and major source MACT requirements in general.

Unit	Description	NOx (tpy)	CO (tpy)	VOC (tpy)	CH_2O (tpy)	Benzene (allowable) (tpy)	Total HAPs (allowable) (tpy)
D1	18 MMscfd Glycol Dehydrator Still Vent (emissions 95% controlled with 0.9 tpy benzene limit; JATCO controls)	0.0	0.0	2.2	0.0	(0.9)	-
D2	30 MMscfd Glycol Dehydrator Still Vent (emissions 95% controlled with 0.9 tpy benzene limit; JATCO controls)	0.0	0.0	44.4	0.0	(0.9)	-
	Total Emissions Increase for Project	0.0	0.0	46.6	-	(1.8)	(23)
Minor modification of a minor PSD source.							
	2008 PTE Totals (includes engines)	205.5	148.2	132.9	8.0 (9.5)	1.3 (1.8)	15.3 (23)

Minor PSD source. Synthetic minor HAP source. Major title V source - Permit #V-SU-0043-06.01 Effective 7/14/08

2008 Summary of Potential Emissions

Unit	Description	NOx (tpy)	CO (tpy)	VOC (tpy)	CH_2O (tpy) (allowable)	Benzene (allowable) (tpy)	Total HAPs (allowable) (tpy)
E1	Waukesha L5794LT (uncontrolled)	33.8	24.3	6.8	2.2	-	2.2
E2	Waukesha L5794LT (uncontrolled)	33.8	24.3	6.8	2.2	-	2.2
E3	Waukesha L5794LT (CH_2O controlled)	33.8	24.3	6.8	0.9	-	0.9
E4	Waukesha L5794LT (CH_2O controlled)	33.8	24.3	6.8	0.9	-	0.9
E5	Waukesha L5794LT (CH_2O controlled)	33.8	24.3	6.8	0.9	-	0.9
E6	Waukesha L5794LT (CH_2O controlled)	33.8	24.3	6.8	0.9	-	0.9
D1	18 MMscfd Glycol Dehydrator	0.2	0.1	33.9	0.0	(0.9)	0.7
D2	30 MMscfd Glycol Dehydrator	0.5	0.4	55.3	0.0	(0.9)	1.2
IEUs	Insignificant units	2.3	2.4	0.40	0.0	-	0.0
	2008 PTE Totals	205.6	148.8	130.1	8.0 (9.5)	(1.8)	9.9 (23)

Minor PSD source. Synthetic minor HAP source. Major title V source – Permit #V-SU-0043-06.01

October 2008 – Significant Permit Modification #2: Replace JATCO controls on dehydrators D1 and D2 with PESCO controls and add an 18 MMscfd backup dehydrator; Maintain enforceable benzene emission limits on dehydrators and facility-wide HAP emission limit; Add/modify permit conditions to limit operations to only two dehydrators at any given time.

No emissions increase from project. Facility PTE remains unchanged or decreases when backup unit D3 is operated in place of Unit D2.

Minor PSD source. Synthetic minor HAP source. Major title V source – Permit #V-SU-0043-06.02

Table 3 –Construction and Permitting History (continued)
Samson Jaques Compressor Station

2009 Summary of Potential Emissions							
Unit	Description	NOx (tpy) [backup only]	CO (tpy) [backup only]	VOC (tpy) [backup only]	CH_2O (tpy) (allowable) [backup only]	Benzene (tpy) (allowable) [backup only]	Total HAPs (tpy) (allowable) [backup only]
E1	Waukesha L5794LT (uncontrolled)	33.8	24.3	6.8	2.2	-	2.2
E2	Waukesha L5794LT (uncontrolled)	33.8	24.3	6.8	2.2	-	2.2
E3	Waukesha L5794LT (CH_2O controlled)	33.8	24.3	6.8	0.9	-	0.9
E4	Waukesha L5794LT (CH_2O controlled)	33.8	24.3	6.8	0.9	-	0.9
E5	Waukesha L5794LT (CH_2O controlled)	33.8	24.3	6.8	0.9	-	0.9
E6	Waukesha L5794LT (CH_2O controlled)	33.8	24.3	6.8	0.9	-	0.9
D1	18 MMscfd Glycol Dehydrator	0.2	0.1	33.9	0.0	(0.9)	0.7
D2	30 MMscfd Glycol Dehydrator	0.5	0.4	55.3	0.0	(0.9)	1.2
D3	18 MMscfd Backup Glycol Dehydrator	[0.2]	[0.1]	[33.9]	[0.0]	[(0.9)]	[0.7]
IEUs	Insignificant units	2.3	2.4	0.40	0.0	-	0.0
	2009 Proposed PTE Totals	205.6	148.8	130.1	8.0 (9.5)	(1.8)	9.9 (23)
Minor PSD source. Synthetic Minor HAP source. Major title V source – Permit #V-SU-0043-06.02							

3. Establishment of Synthetic Minor Limits

a. Applicable PTE guidance

Pursuant to 40 CFR 52.21, "potential to emit" is defined as the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation, or the effect it would have on emissions, is federally enforceable.

National EPA guidance on PTE states that air pollution control equipment (in this case, the oxidation catalysts for the engines and the condenser/combustors for the dehydrators) can be credited as restricting PTE only if federally enforceable requirements are in place requiring the use of such air pollution control equipment. The primary applicable guidance is a memo titled, "Guidance on Limiting Potential to Emit in New Source Permitting," dated June 13, 1989, to EPA Regional Offices, from the Office of Enforcement and Compliance Monitoring (OECA), and the Office of Air Quality Planning & Standards (OAQPS). A later memo to the EPA Regional Offices, dated January 25, 1995, titled "Guidance on Enforceability Requirements for Limiting Potential to Emit through SIP and §112 Rules and General Permits," also provides guidance on this topic.

In consultation with Office of General Counsel at EPA Headquarters, as well as with EPA Regions 9 and 10, the EPA Region 8 office determined that authority exists under the CAA and 40 CFR 71 to create a restriction on potential to emit through issuance of a part 71 permit. The specific citations of authority are:

CAA Section 304(f)(4): provides that the term "emission limitation, standard of performance or emission standard" includes any other standard, limitation, or schedule established under any permit issued pursuant to title V... , any permit term or condition, and any requirement to obtain a permit as a condition of operations.

40 CFR 71.6(b): provides that all terms and conditions in a part 71 permit, including any provisions designed to limit a source's potential to emit, are enforceable by the Administrator and citizens under the Act.

40 CFR 71.7(e)(1)(i)(A)(4)(*i*): provides that a permit modification that seeks to establish a federally enforceable emissions cap assumed to avoid classification as a modification under any provision of title I of the CAA (which includes PSD), and for which there is no underlying applicable requirement, does not qualify as a minor permit modification. Under 40 CFR 71.7(e)(3)(i), it is therefore a significant permit modification, which, according to 40 CFR 71.7(e)(3)(ii), must meet all the requirements that would apply to initial permit issuance or permit renewal.

The use of the part 71 permit as a means to create these limits, however, is limited to those instances where an operating source is already required to obtain a part 71 permit by virtue of its PTE or due to other triggers as outlined in §71.3; or where the operating source already holds a part 71 permit. EPA Region 8 does not have the authority to issue part 71 permits to minor sources, unless it is a minor operating source that is required to obtain a permit pursuant to §71.3.

The part 71 program is not a preconstruction permitting program to be used in place of NSR permitting. The part 71 permit is an operating permit and an application is due within twelve months of starting up a title V facility.

EPA Region 8 does not knowingly issue synthetic minor limits (i.e., limits on potential to emit to avoid major source status) to sources who wish to avoid applicable requirements that have already been triggered (such as NSR or the Once-In-Always-In MACT standards). EPA Region 8 also will not knowingly issue synthetic minor limits to sources who wish to avoid applicable requirements for which there are non-compliance concerns.

Creation of synthetic minor limits in part 71 permits is a temporary, gap-filling measure for those sources operating in Indian country that do not have the ability to obtain these synthetic minor limits through other programs, such as exists in state jurisdictions. Upon promulgation of a Minor NSR rule for sources operating in Indian country, it is expected that this gap-filling measure will no longer be needed.

b. Components of the PTE restrictions

Formaldehyde Emissions CAP and Restrictions on Engine Emissions: The permit for the Jaques Compressor Station already contained a facility-wide formaldehyde emissions cap of 9.5 tpy for any consecutive 12 month period.

Benzene Emissions Limits on Dehydrators & a HAP Emissions Cap: This final permit maintains a 0.9 tpy benzene emission limit on each of the existing permitted dehydration units (D1, D2) and proposes to attribute the same benzene emission limit on the new backup dehydration unit (D3). The benzene emission limits are measured on a 12-month rolling basis. The permit also maintains the

existing facility-wide HAP emissions cap of 23 tpy. A 12-month rolling total facility-wide HAP emission rate is calculated by summing the HAP emissions from each emission unit at the site on a monthly basis and adding this total to the previous 11 months. For insignificant emission units that will not be tested for HAP emissions, the use of emission factors used in the initial part 71 application will be required in calculating emissions. The existing emission limitations will remain achievable by the source and federally and practically enforceable due to the permit conditions that ensure only two of the dehydrators will operate at any given time.

The PTE for the Jaques Compressor Station, enforceable emission controls taken into consideration, are proposed as follows:

Nitrogen Oxides (NO_x) – 205.6 tpy
Carbon Monoxide (CO) – 148.8 tpy
Volatile Organic Compounds (VOC) – 130.1 tpy
Small Particulates (PM_{10}) - negligible
Lead - negligible
Sulfur Dioxide (SO_2) - neg.
Total Allowable Hazardous Air Pollutants (HAPs) – 23 tpy
Largest single HAP (Formaldehyde, CH_2O) – 9.5 tpy

Work Practice Requirements: Samson is required to use oxidation catalysts on engines E3, E4, E5, and E6, as well as abide by work practice and operational requirements to ensure that the emission cap for CH_2O will be met. In addition, EPA has required Samson to use the PESCO Flare Stack and JATCO condenser/combustor BTEX controls and backup operation protocol, as proposed, and to operate the dehydrators and controls according to manufacturer specifications to ensure that the 0.9 tpy benzene restriction for each of the dehydrators is met and the necessary HAP reductions are made to ensure that the facility-wide HAP emission cap is being met.

System Operation of the PESCO Flare Stacks: Samson provided the following description of the dehydrator control equipment and the manufacturer's guarantee of 95% destruction efficiency in their October 23, 2008 significant modification application. The operational guarantee was provided by PESCO Process Equipment and Service Company, Inc (PESCO).

Environmental Protection Equipment (Samson):

"The PESCO control unit consists of two, vertical concentric cylinders. A constant-burn main burner, that fires continuously, and the pilot light are located at the bottom of the inner cylinder. Combustion air is supplied by flame arrestors near the bottom of the outer shell. The flame arrestors also function to cool the annual (*sic*) space between the outer shell and the inner liner. The overhead gas stream from the dehydration unit enters the flare stack into a circular torus to the combustion zone, located beneath the torus. Any free liquids are evaporated and forced into the combustion zone. All exhaust gases are released up the inner cylinder of the flare stack."

Operational Guarantee (PESCO):

"The PESCO Flare Stack (enclosed flare) is guaranteed to achieve total destruction of 98% or greater of all hydrocarbons present in the overhead stream from the still column of a glycol dehydrator. This assumes that the operating parameters do not exceed those to which the flare stack was initially

designed. The PESCO Flare Stack is also guaranteed to meet the environmental requirements as set forth in 40 CFR 60.18." As explained previously, the requirements for flares at 40 CFR 60.18 and 40 CFR 63.11 are essentially identical. Therefore EPA verified that if the PESCO Flare Stacks are guaranteed to meet the requirements in 40 CFR 60.18, it can also be inferred that they would meet the requirements at 40 CRR 63.11, which regulates flares that control HAPs.

System Operation of the JATCO BTEX Eliminator: Samson provided the following description of the dehydrator control equipment in their April 18, 2008 supplemental application for Significant Modification #1 (permit # V-SU-0043-06.02) as the manufacturer's guarantee of 95% destruction efficiency. The description was provided by JATCO, Inc.

Environmental Protection Equipment:

"The system operation of the JATCO BTEX "eliminator" is able to achieve stack test results in excess of 95% destruction efficiency by routing the pre-condensed still column vapors to the main burner and inducing the low pressure VOCs into the primary air inlet of the original burner using a patented JATCO compound injector burner assembly. When re-boiler temperature is reached, a Kimray motor valve stops the VOC flow to the main burner and a second Kimray motor valve opens to route the VOCs to the exhaust stack igniter (to be installed with the unit). The igniter consists of a stainless steel nipple with a 0.035 stainless wire coil. As the main burner is on its firing cycle, the exhaust gases keep this stainless coil red hot by cumulating heat in the fire tube. After the main burner shuts off, and VOCs are routed to the exhaust stack, the coil will ignite or flash the vapor for a period until there is free air oxygen dilution. The actual stack testing would show burner on/burner off cycles and concentrations. It is also a note that [during] general operation of standard glycol re-boiler dehydration [units], when the burner is on is when you (sic) achieve the flash/flux around the fire tube and when it shuts off the VOC output from the still column diminishes rapidly. JATCO Environmental Inc. stands behind all of the testing performed on our units and will purchase any unit back that does not perform to these standards."

Monitoring – Formaldehyde Cap: Monitoring is currently accomplished by reference method performance testing for CH_2O emissions on an annual basis for the uncontrolled engines and quarterly (conditionally extended to semi-annually) for the controlled engines. Reference method performance testing is also required each time any of the engines are swapped out in accordance with the Alternative Operating Scenario condition in the permit, and each time the catalyst is changed out. Samson committed to a 60 % CH_2O reduction efficiency for the catalyst on each engine (compliance with the 9.5 tpy emission limit for CH_2O at the engines is predicated on effective oxidation catalyst controls). Therefore the conditional quarterly/semi-annual testing frequency is based on attaining this efficiency on a consistent basis. Samson is also required to monitor inlet temperature to the catalyst for each controlled engine with a requirement that the temperature remain within the manufacturer's specified parameters. Also, Samson is required to monitor pressure drop across the catalyst to ensure that the catalyst is neither plugged nor blown out. Finally, Samson is also required to follow the oxidation catalyst control system manufacturer's recommended maintenance schedule and procedures to ensure optimum catalyst performance.

Monitoring – Dehydrator Benzene Emissions and Facility-wide HAP Emission Cap: Samson is already required to monitor the inlet gas characteristics on a monthly basis. The inlet gas characteristics include the dehydrator inlet wet gas temperature, the inlet wet gas pressure, and the extended inlet wet gas concentration of HAP constituents; most notably BTEX (benzene, toluene, ethyl

benzene, and xylene). A GRI-GLYCalc is required to be run on a monthly basis, using the maximum glycol pump rate, the maximum gas throughput rate, and the latest quarterly inlet wet gas analysis to determine the benzene and total HAP emissions from each dehydrator that operates during each one month period.

The worst possible gas sample that could conceivably be received at this time at the station and processed by the dehydrators was modeled using GRI-GLYCalc Version 4.0. The model run demonstrated that with the 98 percent and 95 percent claims given by the control equipment manufacturers, the benzene emissions would be 0.14 tpy for D1 and backup unit D3, and 0.23 tpy for D2. In addition, the total HAP emissions from the dehydrators were calculated to be 0.17 tpy and 0.28 tpy, respectively. The margin of compliance for these units is so large, EPA concluded that requiring periodic reference method stack testing would be excessive.

4. Tribe Information

a. Indian country:

Samson's Jaques Compressor Station is located within the exterior boundaries of the Southern Ute Indian Reservation and is thus within Indian country as defined at 18 U.S.C. §1151. The Southern Ute Tribe does not have a federally-approved Clean Air Act (CAA) title V operating permits program nor does EPA's approval of the State of Colorado's title V program extend to Indian country. Thus, EPA is the appropriate governmental entity to issue the title V permit to this facility.

b. The Reservation:

The Southern Ute Indian Reservation is located in southwestern Colorado adjacent to the New Mexico boundary. Ignacio is the headquarters of the Southern Ute Tribe, and Durango is the closest major city, just 5 miles outside of the north boundary of the Reservation. Current information indicates that the population of the Tribe is about 1,305 people with approximately 410 tribal members living off the Reservation. In addition to Tribal members, there are over 30,000 non-Indians living within the exterior boundaries of the Southern Ute Reservation.

c. Tribal government:

The Southern Ute Indian Tribe is governed by the Constitution of the Southern Ute Indian Tribe of the Southern Ute Indian Reservation, Colorado adopted on November 4, 1936 and subsequently amended and approved on October 1, 1975. The Southern Ute Indian Tribe is a federally recognized Tribe pursuant to Section 16 of the Indian Reorganization Act of June 18, 1934 (48 Stat. 984), as amended by the Act of June 15, 1935 (49 Stat. 378). The governing body of the Southern Ute Indian Tribe is a seven member Tribal Council, with its members elected from the general membership of the Tribe through a yearly election process. Terms of the Tribal Council are three (3) years and are staggered so in any given year two (2) members are up for reelection. The Tribal Council officers consist of a Chairman, Vice-Chairman, and Treasurer.

d. Local air quality and attainment status:

The Tribe maintains an air monitoring network consisting of two stations equipped to measure ambient concentrations of oxides of nitrogen (NO, NO_2, and NO_x), ozone (O_3), and carbon monoxide

(CO), and to collect meteorological data. The Tribe has collected NO_2 and O_3 data at the Ignacio, Colorado station (also known as the Ute 1 station, with AQS identification number 08-067-7001) and the Bondad, Colorado station (also known as Ute 3, with AQS identification number 08-067-7003) since June 1, 1982, and April 1, 1997, respectively. The CO channel at the Ignacio station has been reporting to AQS since January 1, 2000, and both stations began reporting NO and NO_x data to AQS on the same day. Also in 2000, both stations initiated meteorological monitors measuring wind speed, wind direction, vertical wind speed, outdoor temperature, relative humidity, solar radiation, and rain/snowmelt precipitation. Reporting of vertical wind speed data from both stations terminated on July 1, 2007. Particulate data (PM_{10}) was collected from December 1, 1981 to September 30, 2006 at the Ignacio station and from April 1, 1997 to September 30, 2006 at the Bondad station. The Tribe reports hourly data to AQS for the criteria pollutants being monitored (NO_2, O_3, and CO), allowing AQS users to retrieve data that can be compared to any of the National Ambient Air Quality Standards for these pollutants.

5. Analysis of Federal Regulations

a. Applicable requirement review:

The following discussions address applicable requirements and requirements that may appear to be applicable, but are not. All applicable and non-applicable requirements addressed here are included in the Code of Federal Regulations at title 40.

Chemical Accident Prevention Program

Based on Samson's applications, the Jaques Compressor Station currently has no regulated substances above the threshold quantities in this rule, and therefore, is not subject to the requirement to develop and submit a risk management plan. However, Samson has an ongoing responsibility to submit this plan IF a substance is listed that the total source has in quantities over the threshold amount or IF the total source ever increases the amount of any regulated substance above the threshold quantity.

Stratospheric Ozone and Climate Protection – Subpart F

Based on information supplied by Samson, there are no air conditioning units that may contain Class I or Class II refrigerants located at the Jaques Compressor Station, so 40 CFR part 82, subpart F does not apply. If Samson ever decides to use its personnel to utilize or service any air conditioning units for the facility, then it must comply with the standards of 40 CFR part 82, subpart F, specifically, §82.156, §82.158, §82.161, and §82.166(i), and request a significant modification to this part 71 permit.

Stratospheric Ozone and Climate Protection – Subpart H

The Jaques Compressor Station does not have fire extinguishers on site that use halon, so 40 CFR part 82, subpart H for halon emissions reduction does not apply. If Samson Resources ever decides to use its personnel to service, maintain, test, repair, or dispose of equipment that contains halons or use such equipment during technician training, then it must comply with the standards of 40 CFR part 82, subpart H for halon emissions reduction and request a significant modification to this part 71 permit.

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart A: General Provisions. This subpart applies to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication of any standard in part 60. The general provisions under subpart A apply to sources that are subject to the specific subparts of part 60.

As explained below, Jaques Compressor Station is not subject to any specific subparts of part 60, therefore the General Provisions of part 60 do not apply.

40 CFR Part 60, Subpart K: Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978. This rule applies to storage vessels for petroleum liquids with a storage capacity greater than 40,000 gallons. 40 CFR part 60, subpart K does not apply to storage vessels for petroleum or condensate stored, processed, and/or treated at a drilling and production facility prior to custody transfer.

The subpart does not apply to the storage vessels at the Jaques Compressor Station because there are no tanks at this site that were constructed, reconstructed, or modified after June 11, 1973, and prior to May 19, 1978.

40 CFR Part 60, Subpart Ka: Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to June 23, 1984. This rule applies to storage vessels for petroleum liquids with a storage capacity greater than 40,000 gallons. Subpart Ka does not apply to petroleum storage vessels with a capacity of less than 420,000 gallons used for petroleum or condensate stored, processed, or treated prior to custody transfer.

This subpart does not apply to the storage vessels at the Jaques Compressor Station because there are no tanks at this site that were constructed, reconstructed, or modified after May 18, 1978, and prior to June 23, 1984.

40 CFR Part 60, Subpart Kb: Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced After July 23, 1984. This rule applies to storage vessels with a capacity greater than or equal to 75 cubic meters.

The subpart does not apply to the storage vessels at the Jaques Compressor Station because the facility has no tanks greater than or equal to 75 cubic meters that store volatile organic liquids.

40 CFR Part 60, Subpart GG: Standards of Performance for Stationary Gas Turbines. This rule applies to stationary gas turbines, with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hr), that commenced construction, modification, or reconstruction after October 3, 1977.

There are no stationary gas turbines located at the Jaques Compressor Station. Therefore, this rule does not apply.

40 CFR Part 60, Subpart KKK: Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants. This rule applies to compressors and other equipment at onshore natural gas processing facilities. As defined in this subpart, a natural gas processing plant is any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids (NGLs) to natural gas products, or both. Natural gas liquids are defined as the hydrocarbons, such as ethane, propane, butane, and pentane that are extracted from field gas.

The Jaques Compressor Station does not extract NGLs from field gas, nor does it fractionate mixed NGLs to natural gas products, and thus does not meet the definition of a natural gas processing plant under this subpart. Therefore, this rule does not apply.

40 CFR Part 60, Subpart LLL: Standards of Performance for Onshore Natural Gas Processing; SO_2 Emissions. This rule applies to sweetening units and sulfur recovery units at onshore natural gas processing facilities. As defined in this subpart, sweetening units are process devices that separate hydrogen sulfide (H_2S) and carbon dioxide (CO_2) from a sour natural gas stream. Sulfur recovery units are defined as process devices that recover sulfur from the acid gas (consisting of H_2S and CO_2) removed by a sweetening unit.

The Jaques Compressor Station does not perform sweetening or sulfur recovery at the facility. Therefore, this rule does not apply.

40 CFR Part 60, Subpart JJJJ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. This subpart establishes emission standards and compliance requirements for the control of emissions from stationary spark ignition (SI) internal combustion engines (ICE) that commenced construction, modification or reconstruction after June 12, 2006, where the SI ICE are manufactured on or after specified manufacture trigger dates. The manufacture trigger dates are based on the engine type, fuel used, and maximum engine horsepower.

For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator (See 40 CFR 60.4230(a)).

According to the information provided by Samson in the April 18, 2008, supplemental application for Significant Modification #1 (see Table 4 below), none of the engines are subject to this subpart.

Table 4 – NSPS Subpart JJJJ Applicability
Samson Jaques Compressor Station

Unit ID	Serial Number	Unit Description	Fuel	HP	Manufacture Date	Start-up Date	Subpart JJJJ Trigger Date – Manufactured on or after
E1	C-14536/1	Waukesha 5794 LT, Lean Burn	Natural gas	1400	4/2005	4/21/2005	7/1/2007
E2	C-17235/1	Waukesha 5794 LT, Lean Burn	Natural gas	1400	1/2007	8/31/2007	7/1/2007
E3	C-15810/1	Waukesha 5794 LT, Lean Burn	Natural gas	1400	8/2005	12/9/2005	7/1/2007
E4	C-15809/1	Waukesha 5794 LT, Lean Burn	Natural gas	1400	8/2005	12/9/2005	7/1/2007
E5	C-15866/1	Waukesha 5794 LT, Lean Burn	Natural gas	1400	4/2006	6/28/2007	7/1/2007
E6	C-15965/1	Waukesha 5794 LT, Lean Burn	Natural gas	1400	3/2006	2/1/2008	7/1/2007
IEU 9	-	Ford 460 – 6 cylinder pump engine	-	84	Pre-1996	2003	7/1/2008
IEU 12	-	Ford – 4 cylinder engine	-	21	1995	2003	7/1/2008
IEU 14	-	Arrow – pump engine	-	13	Pre-1980	2003	7/1/2008

Note: The missing information for engines IEU 9, IEU 12, and IEU 14 was not needed for this applicability determination.

40 CFR Part 60, Subpart KKKK: Standards of Performance for Stationary Combustion Turbines. This subpart establishes emission standards and compliance schedules for the control of emissions from stationary combustion turbines that commenced construction, modification or reconstruction after February 18, 2005. The rule applies to stationary combustion turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour.

Samson does not operate stationary combustion turbines at the Jaques Compressor Station. Therefore, this rule does not apply.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

40 CFR Part 63, Subpart A: General Provisions. This subpart contains national emissions standards for hazardous air pollutants (HAP) that regulate specific categories of sources that emit one or more HAP regulated pollutants under the Clean Air Act. The general provisions under subpart A apply to sources that are subject to the specific subparts of part 63.

The Jaques Compressor Station is not subject to any specific subparts of part 63, therefore the General Provisions of part 63 do not apply. The determination of non-applicability for the facility as proposed is dependent either on dates of construction, as defined in 40 CFR 63.2 or on the facility's status as a synthetic minor source of HAPs. This permit establishes enforceable permit conditions limiting facility-wide HAP and formaldehyde emissions, and benzene emissions from each dehydrator. Absent such conditions the facility could be subject to 40 CFR part 63, subparts ZZZZ for major HAP sources, HH for major HAP sources, and HH for minor HAP sources.

40 CFR Part 63, Subpart HH: National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities. This subpart applies to the owners and operators of affected units located at natural gas production facilities that are major sources of HAPs, and that process, upgrade, or store natural gas prior to the point of custody transfer, or that process, upgrade, or store natural gas prior to the point at which natural gas enters the natural gas transmission and storage source category or is delivered to a final end user. The affected units are glycol dehydration units, storage vessels with the potential for flash emissions, and the group of ancillary equipment, and compressors

intended to operate in volatile hazardous air pollutant service, which are located at natural gas processing plants.

Throughput Exemption

Those sources whose maximum natural gas throughput, as appropriately calculated in §63.760(a)(1)(i) through (a)(1)(iii), is less than 18,400 standard cubic meters per day are exempt from the requirements of this subpart.

Source Aggregation

Major source, as used in this subpart, has the same meaning as in §63.2, except that:

1) Emissions from any oil and gas production well with its associated equipment and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units.

2) Emissions from processes, operations, or equipment that are not part of the same facility shall not be aggregated.

3) For facilities that are production field facilities, only HAP emissions from glycol dehydration units and storage tanks with flash emission potential shall be aggregated for a major source determination.

Facility

For the purpose of a major source determination, facility means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in subpart HH. Examples of facilities in the oil and natural gas production category include, but are not limited to: well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Production Field Facility

Production field facilities are those located prior to the point of custody transfer. The definition of custody transfer (40 CFR 63.761) means the point of transfer after the processing/treating in the producing operation, except for the case of a natural gas processing plant, in which case the point of custody transfer is the inlet to the plant.

Natural Gas Processing Plant

A natural gas processing plant is defined in 40 CFR 63.761 as any processing site engaged in the extraction of NGLs from field gas, or the fractionation of mixed NGLs to natural gas products, or a combination of both. A treating plant or gas plant that does not engage in these activities is considered to be a production field facility.

Major Source Determination for Production Field Facilities

The definition of major source in this subpart (at 40 CFR 63.761) states, in part, that only emissions from the dehydration units and storage vessels with a potential for flash emissions at production field facilities are to be aggregated when comparing to the major source thresholds. For facilities that are not production field facilities, HAP emissions from all HAP emission units shall be aggregated.

Area Source Applicability

40 CFR part 63, subpart HH applies also to area sources of HAPs. An area source is a HAP source whose total HAP emissions are less than 10 tpy of any single HAP or 25 tpy for all HAPs in aggregate. This subpart requires different emission reduction requirements for glycol dehydration units found at oil and gas production facilities based on their geographical location.

Units located in densely populated areas (determined by the Bureau of Census) and known as urbanized areas with an added 2-mile offset and urban clusters of 10,000 people or more, are required to have emission controls. Units located outside these areas will be required to have the glycol recirculation pump rate optimized or operators can document that PTE of benzene is less than 1 tpy.

Applicability of subpart HH to the Jaques Compressor Station

The Jaques Compressor Station does not engage in the extraction of NGLs, and therefore, is not considered a natural gas processing plant. Hence, the point of custody transfer, as defined in this subpart HH, occurs downstream of the station and the facility would therefore be considered a production field facility. For production field facilities, only emissions from the dehydration units and storage vessels with a potential for flash emissions are to be aggregated to determine major source status. The facility does not have flash tanks, and the HAP emissions from the dehydration units alone at the facility are below the major source thresholds of 10 tpy of a single HAP and 25 tpy of aggregated HAPs.

With respect to the area source requirements of this subpart, the facility is located outside both an urban area and an urban cluster. Furthermore, uncontrolled benzene emissions from the two operating and one backup TEG glycol dehydrator units at the facility have been determined to be less than 1 tpy using GRI-GLYCalc Version 4.0, as presented in the supporting documentation in the application. However, Samson has opted to establish a benzene emission limit of 0.9 tpy for each dehydration unit to assure that processing variables do not result in triggering this requirement at a future date. **As a result, the dehydration units at the facility will be exempt from the §63.764(d) general requirements for area sources. However, the following general recordkeeping requirement will continue to apply to this facility:**

- §63.774(d)(1) – retain the GRI-GLYCalc determinations used to demonstrate that actual average benzene emissions are below 1 tpy.

The monitoring and record keeping requirements for the benzene emission limits on each of the dehydrators serves to meet this requirement.

40 CFR Part 63, Subpart HHH: National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities. This rule applies to natural gas transmission and storage facilities that transport or store natural gas prior to entering the pipeline to a local distribution company or to a final end user, and that are a major source of HAP emissions. Natural gas transmission means the pipelines used for long distance transport and storage vessel is a tank or other vessel designed to contain an accumulation of crude oil, condensate, intermediate hydrocarbon, liquids, produced water or other liquid and is constructed of wood, concrete, steel or plastic structural support.

This subpart does not apply to the Jaques Compressor Station as the facility is a natural gas production facility and not a natural gas transmission or storage facility.

40 CFR Part 63, Subpart ZZZZ: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. This rule establishes national emission limitations and operating limitations for HAPs emitted from stationary reciprocating internal combustion engines (RICE).

This rule applies to owners or operators of new and reconstructed stationary RICE of any horsepower rating which are located at a major or area source of HAP. While all stationary RICE located at major or area sources are subject to the final rule (promulgated January 18, 2008, amending the final rule promulgated June 15, 2004), there are distinct requirements for regulated stationary RICE depending on their design, use, horsepower rating, fuel, and major or area HAP emission status.

Major HAP Sources

The standard now applies to engines with a horsepower rating of less than or equal to 500 bhp in addition to those engines with a horsepower rating greater than 500 bhp. The standard continues to have specific requirements for new or reconstructed RICE and for existing spark ignition 4 stroke rich burn (4SRB) stationary RICE located at a major HAP facility.

With the exception of the existing spark ignition 4SRB stationary RICE, other types of existing stationary RICE (i.e., spark ignition 2 stroke lean burn (2SLB), spark ignition 4 stroke lean burn (4SLB), compression ignition (CI), stationary RICE that combust landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, emergency, and limited use units) located at a major source of HAP emissions are not subject to any specific requirement under the final rule.

Existing RICE: A stationary RICE with a site rating of greater than 500 hp is existing at a major source of HAP emissions if construction or reconstruction (as defined in §63.2) of the unit commenced before December 19, 2002. A stationary RICE with a site rating of less than or equal to 500 bhp is existing at a major source of HAP emissions if construction or reconstruction (as defined in §63.2) of the unit commenced before June 12, 2006.

New RICE: A stationary RICE with a site rating of greater than 500 bhp is new at a major source of HAP emissions if construction or reconstruction (as defined in §63.2) of the unit commenced on or after December 19, 2002. A stationary RICE with a site rating of less than or equal to 500 hp is new at a major source of HAP emissions if construction or reconstruction (as defined in §63.2) of the unit commenced on or after June 12, 2006.

Area (minor) HAP Sources

The standard now has specific requirements for new and reconstructed stationary RICE located at minor sources of HAPs, for engines with all possible horsepower ratings. The area source standards for new stationary RICE reference the requirements of NSPS JJJJ for Spark Ignition Internal Combustion Engines and/or NSPS IIII for Compression Ignition Internal Combustion Engines. Existing RICE located at an area HAP source are not subject to any specific requirement under the final rule.

Existing RICE: A stationary RICE is existing at an area source of HAP emissions if construction or reconstruction of the unit commenced before June 12, 2006. The area source standards do not apply to existing stationary RICE.

New RICE: A stationary RICE is new at an area source of HAP emissions if construction or reconstruction (as defined in §63.2) of the unit commenced on or after June 12, 2006.

Applicability of 40 CFR 63, Subpart ZZZZ to the Jaques Compressor Station

According to the information provided by Samson in the April 18, 2008, supplemental application for Significant Modification #1 (see Table 5 below), none of the engines at this facility are subject to the major source MACT standards at subpart ZZZZ since the PTE is below the major source threshold of 25 tpy for the aggregate of HAP emissions and below 10 tpy for any single HAP due to the synthetic minor facility-wide HAP emissions and engine specific formaldehyde cap emission limits.

Engines E1, E3, E4, IEU9, IEU12, and IEU14 were constructed, reconstructed or modified before June 12, 2006, and thus, are not subject to the new area source standards. However, E2, E5, and E6 were constructed, reconstructed, or modified after June 12, 2006, and have triggered the area source MACT standards for RICE.

The MACT standard for RICE defers to NSPS JJJJ requirements for Spark Ignition Internal Combustion Engines. As mentioned in the discussion for NSPS JJJJ applicability, above, the NSPS JJJJ standards do not apply to the engines as they were manufactured before the manufacture trigger date in the rule. Therefore, engines E2, E5, and E6, while subject to 40 CFR 63, subpart ZZZZ, do not have any specific requirements.

Table 5 – NESHAP Subpart ZZZZ Applicability
Samson Jaques Compressor Station

Unit ID	Serial Number	Unit Description	Fuel	HP	Commenced Construction Date	Trigger Date for Area Source Standards	Subject to Area Source Standards?
E1	C-14536/1	Waukesha 5794 LT, Lean Burn	Natural gas	1400	4/21/2005	6/12/2006	No
E2	C-17235/1	Waukesha 5794 LT, Lean Burn	Natural gas	1400	8/31/2007	6/12/2006	Yes, but no requirements
E3	C-15810/1	Waukesha 5794 LT, Lean Burn	Natural gas	1400	12/9/2005	6/12/2006	No
E4	C-15809/1	Waukesha 5794 LT, Lean Burn	Natural gas	1400	12/9/2005	6/12/2006	No
E5	C-15866/1	Waukesha 5794 LT, Lean Burn	Natural gas	1400	6/28/2007	6/12/2006	Yes, but no requirements
E6	C-15965/1	Waukesha 5794 LT, Lean Burn	Natural gas	1400	2/1/2008	6/12/2006	Yes, but no requirements
IEU 9	-	Ford 460 – 6 cylinder pump engine	-	84	2003	6/12/2006	No
IEU 12	-	Ford – 4 cylinder engine	-	21	2003	6/12/2006	No
IEU 14	-	Arrow – pump engine	-	13	2003	6/12/2006	No

Note: The missing information for engines IEU 9, IEU 12, and IEU 14 was not needed for this applicability determination.

Prevention of Significant Deterioration (PSD)

New PSD major stationary sources of air pollution and significant modifications to existing PSD major stationary sources are required by the CAA to obtain a pre-construction air pollution control permit before commencing construction. A major stationary source is any source type belonging to a list of 28 source categories, which emits or has the potential to emit 100 tpy or more of any pollutant regulated under the CAA or any other source type which emits or has the potential to emit such pollutants in amounts equal to or greater than 250 tpy.

The Jaques Compressor Station does not belong to any of the 28 source categories. Therefore, the potential to emit threshold for determining PSD applicability for this source is 250 tpy. The potential to emit of regulated New Source Review pollutants at this facility are currently below the major source threshold of 250 tpy absent any PTE restriction in the part 71 permit. Hence, the Jaques Compressor Station is a true minor PSD source.

Compliance Assurance Monitoring (CAM) Rule

The CAM rule applies to each Pollutant Specific Emission Unit (PSEU) that meets a three-part test. The PSEU must be 1) subject to an emission limitation or standard, and 2) use an add-on control device to achieve compliance with that limit, and 3) have potential pre-control emissions that exceed or are equivalent to the title V, 100 tpy major source threshold.

The CAM rule does not apply to any of the units at the Jaques Compressor Station as pre-controlled emissions for each controlled unit are less than 100 tpy.

b. Conclusion

Based on the information provided in Samson's application for the Jaques Compressor Station, this source is subject to those existing applicable Federal CAA programs discussed above. The Jaques Compressor Station is not subject to any implementation plan such as exists within state jurisdictions. Therefore, the Jaques Compressor Station is not subject to any other substantive requirements that control their emissions under the CAA.

EPA recognizes that, in some cases, sources of air pollution located in Indian country are subject to fewer requirements than similar sources located on land under the jurisdiction of a state or local air pollution control agency. To address this regulatory gap, EPA is in the process of developing national regulatory programs for preconstruction review of major sources in non-attainment areas and of minor sources in both attainment and non-attainment areas. These programs will establish, where appropriate, control requirements for sources that would be incorporated into part 71 permits. To establish additional applicable, federally-enforceable emission limits, EPA Regional Offices will, as necessary and appropriate, promulgate Federal Implementation Plans (FIPs) that will establish Federal requirements for sources in specific areas. EPA will establish priorities for its direct Federal implementation activities by addressing as its highest priority the most serious threats to public health and the environment in Indian country that are not otherwise being adequately addressed.

Further, EPA encourages and will work closely with all tribes wishing to develop Tribal Implementation Plans (TIPs) for approval under the Tribal Authority Rule. EPA intends that its Federal regulations created through a FIP will apply only in those situations in which a tribe does not have an approved TIP.

6. EPA Authority

a. General authority to issue part 71 permits

Title V of the Clean Air Act requires that EPA promulgate, administer, and enforce a Federal operating permits program when a state does not submit an approvable program within the time frame set by title V or does not adequately administer and enforce its EPA-approved program.
On July 1, 1996 (61 FR 34202), EPA adopted regulations codified at 40 CFR part 71 setting forth the procedures and terms under which the Agency would administer a Federal operating permits program. These regulations were updated on February 19, 1999 (64 FR 8247) to incorporate EPA's approach for issuing Federal operating permits to stationary sources in Indian country.

As described in 40 CFR 71.4(a), EPA will implement a part 71 program in areas where a state, local, or tribal agency has not developed an approved part 70 program. Unlike states, Indian tribes are not required to develop operating permits programs, though EPA encourages tribes to do so. See, e.g., Indian Tribes: Air Quality Planning and Management (63 FR 7253, February 12, 1998) (also known as the "Tribal Authority Rule"). Therefore, within Indian country, EPA will administer and enforce a part 71 Federal operating permits program for stationary sources until a tribe receives approval to administer their own operating permits program.

7. Use of All Credible Evidence

Determinations of deviations, continuous or intermittent compliance status, or violations of the permit are not limited to the testing or monitoring methods required by the underlying regulations or this permit; other credible evidence (including any evidence admissible under the Federal Rules of Evidence) must be considered by the source and EPA in such determinations.

8. Public Participation

a. Public notice

There was a 30-day public comment period for actions pertaining to the draft permit. Public notice was given for the draft permit by mailing a copy of the notice to the permit applicant, the affected state, tribal and local air pollution control agencies, the city and county executives, the state and federal land managers and the local emergency planning authorities which have jurisdiction over the area where the source is located. A copy of the notice was also provided to all persons who have submitted a written request to be included on the mailing list. If you would like to be added to our mailing list to be informed of future actions on these or other Clean Air Act permits issued in Indian country, please send your name and address to:

Claudia Smith, Part 71 Permit Contact
U.S. Environmental Protection Agency, Region 8
1595 Wynkoop Street (8P-AR)
Denver, Colorado 80202-1129

Public notice was published in the Durango Herald on January 16, 2009, giving opportunity for public comment on the draft permit and the opportunity to request a public hearing.

b. Opportunity for comment

Members of the public were given the opportunity to review a copy of the draft permit prepared by EPA, the application, the Statement of Basis for the draft permit, and all supporting materials for the draft permit. Copies of these documents were available at:

La Plata County Clerk's Office
1060 East 2nd Avenue
Durango, Colorado 81302

and

Southern Ute Indian Tribe
Environmental Programs Office
116 Mouache Drive
Ignacio, Colorado 81137

and

US EPA Region 8
Air Program Office
1595 Wynkoop Street (8P-AR)
Denver, Colorado 80202-1129

All documents were available for review at the U.S. EPA Region 8 office Monday through Friday from 8:00 a.m. to 4:00 p.m. (excluding federal holidays).

Any interested person could submit written comments on the draft part 71 operating permit during the public comment period to the Part 71 Permit Contact at the address listed above. EPA keeps a record of the commenters and of the issues raised during the public participation process. All comments have been considered and answered by EPA in making the final decision on the permit.

Anyone, including the applicant, who believed any condition of the draft permit was inappropriate could raise all reasonable ascertainable issues and submit all arguments supporting their position by the close of the public comment period. Any supporting materials submitted must have been included in full and may not have been incorporated by reference, unless the material was already submitted as part of the administrative record in the same proceeding or consisted of state or federal statutes and regulations, EPA documents of general applicability, or other generally available reference material.

EPA did not receive any comments on the draft permit and Statement of Basis during the public comment period.

c. Opportunity to request a hearing

A person could submit a written request for a public hearing to the Part 71 Permit Contact, at the address listed in Section 6.a above, by stating the nature of the issues to be raised at the public hearing. EPA did not receive any requests for a public hearing during the public comment period.

d. Appeal of permits

Within 30 days after the issuance of a final permit decision, any person who filed comments on the draft permit or participated in the public hearing may petition to the Environmental Appeals Board to review any condition of the permit decision. Any person who failed to file comments or participate in the public hearing may petition for administrative review, only if the changes from the draft to the final permit decision or other new grounds were not reasonably foreseeable during the public comment period. The 30-day period to appeal a permit begins with EPA's service of the notice of the final permit decision.

The petition to appeal a permit must include a statement of the reasons supporting the review, a demonstration that any issues were raised during the public comment period, a demonstration that it was impracticable to raise the objections within the public comment period, or that the grounds for such objections arose after such a period. When appropriate, the petition may include a showing that the condition in question is based on a finding of fact or conclusion of law which is clearly erroneous; or, an exercise of discretion, or an important policy consideration that the Environmental Appeals Board should review.

The Environmental Appeals Board will issue an order either granting or denying the petition for review, within a reasonable time following the filing of the petition. Public notice of the grant of review will establish a briefing schedule for the appeal and state that any interested person may file an amicus brief. Notice of denial of review will be sent only to the permit applicant and to the person requesting the review. To the extent review is denied, the conditions of the final permit decision become final agency action.

A motion to reconsider a final order shall be filed within 10 days after the service of the final order. Every motion must set forth the matters claimed to have been erroneously decided and the nature of the alleged errors. Motions for reconsideration shall be directed to the Administrator rather than the Environmental Appeals Board. A motion for reconsideration shall not stay the effective date of the final order unless it is specifically ordered by the Board.

e. Petition to reopen a permit for cause

Any interested person may petition EPA to reopen a permit for cause, and EPA may commence a permit reopening on its own initiative. EPA will only revise, revoke and reissue, or terminate a permit for the reasons specified in 40 CFR 71.7(f) or 71.6(a)(6)(i). All requests must be in writing and must contain facts or reasons supporting the request. If EPA decides the request is not justified, it will send the requester a brief written response giving a reason for the decision. Denial of these requests is not subject to public notice, comment, or hearings. Denials can be informally appealed to the Environmental Appeals Board by a letter briefly setting forth the relevant facts.

f. Notice to affected states/tribes

As described in 40 CFR 71.11(d)(3)(i), public notice was given by mailing a copy of the notice to the air pollution control agencies of affected states, tribal and local air pollution control agencies that have jurisdiction over the area in which the source is located, the chief executives of the city and county where the source is located, any comprehensive regional land use planning agency and any state or Federal land manager whose lands may be affected by emissions from the source. The following entities were notified:

- State of Colorado, Department of Public Health and Environment
- State of New Mexico, Environment Department
- Southern Ute Indian Tribe, Environmental Programs Office
- Ute Mountain Ute Tribe, Environmental Programs
- Navajo Tribe, Navajo Nation EPA
- Jicarilla Tribe, Environmental Protection Office
- La Plata County, County Clerk
- Town of Ignacio, Mayor
- National Park Service, Air, Denver, CO
- U.S. Department of Agriculture, Forest Service, Rocky Mountain Region
- Carl Weston
- San Juan Citizen Alliance
- Wild Earth Guardians (formerly Rocky Mountain Clean Air Action)